DOCUMENT RESUME

ED 199 375 UD 021 375

AUTHOR Irizarry, Ruddie A.; And Others
TITLE DeWitt Clinton High School Bilingual-Bicultural Program. ESEA Title VII. Final Evaluation Report, 1979-1980.
INSTITUTION New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation.
SPONS AGENCY Office of Bilingual Education and Minority Languages Affairs (ED), Washington, D.C.
BUREAU NO 5001-47-07611-12
PUB DATE 80
NOTE 66p.; For related documents, see UD 021 352-358, UD 021 360, UD 021 360 UD 021 362-366, UD 021 368, UD 021 371, UD 021 378-379, and UD 021 382-384.

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Achievement Gains; Biculturalism; *Bilingual Education; Community Involvement; *English (Second Language); *Hispanic Americans; Instructional Materials; Language Proficiency; Mathematics; Parent Participation; *Program Effectiveness; Program Evaluation; Sciences; Secondary Education; Social Studies; *Spanish; Staff Development
IDENTIFIERS Elementary Secondary Education Act Title VII; Limited English Speaking; New York (Bronx)

ABSTRACT

This is an evaluation of a Title VII Bilingual/Bicultural Education Program conducted in a New York City high school in 1979-1980. The population of the school's attendance area is discussed along with student characteristics. The program's organizational structure and its instructional component are described and the funding sources for the instructional component are listed. Tables show the number of students in both mainstream and bilingual classes with the criteria for their selection. Other areas covered in the report include: (1) curriculum and materials development; (2) support services; (3) staff development; (4) parental and community involvement; (5) affective domain; and (6) dissemination of information about the program. Test scores are presented for: (1) reading in English and Spanish; (2) mathematics achievement and performance; (3) science performance; (4) social studies performance; and (5) English as a second language. Tables also show attendance figures. Conclusions and recommendations are offered. (APM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

APR 1 1981

ED199375

FINAL EVALUATION REPORT

DEWITT CLINTON HIGH SCHOOL

BILINGUAL-BICULTURAL PROGRAM

ESEA TITLE VII

PROJECT 5001-42-07611/12

1979 - 1980

NEW YORK CITY PUBLIC SCHOOLS

OFFICE OF EDUCATIONAL EVALUATION

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

UD021375

BOARD OF EDUCATION
OF
THE CITY OF NEW YORK
1980

HON. JOSEPH G. BARKAN
President

HON. MIGUEL MARTINEZ
Vice-President

HON. AMELIA ASHE

HON. ROBERT CHRISTEN

HON. IRENE IMPELLIZZERI

HON. MARJORIE LEWIS

HON. JAMES REGAN

FRANK J. MACCHIAROLA
Chancellor

RICHARD F. HALVERSON
Deputy Chancellor

FINAL EVALUATION REPORT

DEWITT CLINTON HIGH SCHOOL

BILINGUAL-BICULTURAL PROGRAM

ESEA TITLE VII

1979-1980

Principal:

Dr. David W. Fuchs

Director:

Mrs. Ruth Greenblatt

Prepared By:

Ruddie A. Irizarry
Evaluation and Planning Manager
Office of Educational Evaluation

Judith A. Torres
Evaluation and Planning Specialist
Office of Educational Evaluation

Assisted By:

Frank Guerrero, Consultant

Frank O'Brien, Ph.D., Consultant

NEW YORK CITY PUBLIC SCHOOLS
OFFICE OF EDUCATIONAL EVALUATION
RICHARD GUTTENBERG, ADMINISTRATOR

TABLE OF CONTENTS

		PAGE
I.	Demographic Context	1
II.	Student Characteristics	3
III.	Program Description	4
IV.	Instructional Component	7
	Funding Sources for the Instructional Component	13
	Classes	14
	Tutoring	20
V.	The Non-Instructional Component	20
	Curriculum and Materials Development	22
	Supportive Services	22
	Staff Development	25
	Parental and Community Involvement	31
	Affective Domain	32
	Dissemination	34
VI.	Findings	36
VII.	Summary of Findings	53
VIII.	Conclusions and Recommendations	55

LIST OF CHARTS AND TABLES

			PAGE
Chart	I	Organizational Chart for Bilingual Program at DeWitt Clinton	6
Table	I	Typical Program for Bilingual Students in Grade 9	8
Table	II	Students Leaving the Program During 1979-1980 and Their Reason for Leaving	10
Table	III	Distribution of Students According to Percentage of Instruction in Spanish	11
Table	IV	Instructional Component Personnel by Funding Source	13
Table	V	Breakdown of Students in Bilingual Classes	16
Table	VI	Breakdown of Students in Mainstream Classes	17
Table	VII	Non-Instructional Component by Funding Source and Personnel Providing Services	21
Table	VIII	University Courses Taken by Bilingual Teachers/ Staff During 1979-1980	27
Table	IX	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Fall)	39
Table	X	Student Performance on the CREST by Test Level and Grade (Fall)	40
Table	XI	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Spring)	41
Table	XII	Student Performance on the CREST by Test Level and Grade (Spring)	42
Table	XIII	English Reading Achievement	43
Table	XIV	Native Language Reading Achievement	45
Table	XV	Mathematics Achievement	47
Table	XVI	Mathematics Performance	49

LIST OF CHARTS AND TABLES

(continued)

		PAGE
Table XVII	Science Performance	50
Table XVIII	Social Studies Performance	51
Table XIX	Attendance Rates	52

DeWITT CLINTON HIGH SCHOOL

BILINGUAL-BICULTURAL PROGRAM

Location:	Mosholu Parkway and Paul Avenue Bronx, New York
Year of Operation:	1979-1980, Second Year of Funding
Target Language:	Spanish
Number of Participants:	197 Students
Principal:	Dr. David W. Fuchs
Director:	Mrs. Ruth Greenblatt

I. DEMOGRAPHIC CONTEXT

DeWitt Clinton High School, a specialized boys' school, is located in District 10 in the North Bronx. The Bronx has a rapidly growing Hispanic population and the highest percentage of Hispanic students (45.2%) of any borough in New York City. Of the students currently enrolled (1979-1980) at DeWitt Clinton, 60% are two or more years below grade level in reading and 52% of the school population is of Hispanic background.

DeWitt Clinton draws much of its population from the North Bronx, because so much of the South Bronx has been destroyed by fire. The housing surrounding the school consists of predominantly large apartment buildings with a few private homes. The attendance area includes many welfare families, as well as some middle and very few upper class families. The ethnic composition of the surrounding area is 50% Hispanic, 35% Black,

2% Oriental and the rest is White.

A few patterns of language usage within the family and the community have affected the linguistic growth in English of Hispanic students attending DeWitt Clinton. Among Hispanic parents, the mother frequently does not speak or understand English. The father and siblings often speak and understand English with varying degrees of difficulty. The large number of Spanish speaking storekeepers and other businesses has often reduced the need to improve the English skills of community members, since business transactions can be conducted in Spanish.

The population of the DeWitt Clinton attendance area is relatively unstable and highly mobile. Population changes are the result of arson and the departure of white, middle class families. Families visit Puerto Rico and Santo Domingo while school is in session, thus contributing to student absenteeism. Some of these visits are due to illnesses and deaths of relatives. In some instances, students and their families have returned to Puerto Rico to take up permanent residence. Alcoholism, drug abuse and crime in the neighborhood have also motivated families to move to better areas.

Many problems characterize the community and particularly affect students in the program. Among these problems, the following have been identified:

1. low family income--the Annual School Census for 1978-1979 compiled by the Office of Educational Statistics identifies 60% of the pupils at DeWitt Clinton as low income;
2. broken, single parent homes;
3. after-school work by some students;

4. substandard housing and some families living in abandoned buildings; crowded apartments make preparation of homework difficult;
5. great distance from school for some students requiring several transfers and sometimes more than one hour of travel each way to get to school;
6. serious and chronic health problems (emotional, respiratory, and neurological) among some students and their families;
7. absenteeism from school in order to accompany parents or other relatives to social service agencies;
8. absenteeism from school to care for younger siblings;
9. drug and alcohol abuse in the school-community.

II. STUDENT CHARACTERISTICS

Students are identified as eligible for participation in the bilingual program if:

1. they score under the 21st percentile on the English part of the Language Assessment Battery (LAB) and higher than the English on the Spanish part;
2. parents and students request that students be in the program;
3. teachers and guidance counselors refer students to the bilingual program;
4. students' records reveal poor academic performance in English;
5. students are newly arrived from Spanish speaking countries;
6. a Hispanic student has special economic problems and/or low self esteem.

The student population of the bilingual program was Hispanic, with the exception of one student who was born in Korea, but lived in Argentina for 14 years. The place of birth of the 197 students served by the program was as follows:

New York	33%
Puerto Rico	42%
Santo Domingo	11%
Ecuador	9%
Other Countries (Cuba, Colombia, Costa Rica, Peru, Korea and Guatemala)	5%

The range of Spanish literacy of students in the program was wide. Literacy ranged from below average to excellent. The range of English proficiency was also great--it ranged from below average, (where most students fell) to excellent (where very few students fell). Spanish is used at the homes of students 90% of the time. The target population is linguistically heterogeneous--some speak but cannot read Spanish; some speak but cannot read English; some speak both Spanish and English, but are poor readers in both languages; some function at normal to superior academic levels, while others need extensive individual tutoring.

III. PROGRAM DESCRIPTION

The program at DeWitt Clinton was initially funded for school year 1978-1979 for four years. This report covers the second year of funding. The program was founded on the philosophy that cultural reinforcement, and the improvement of self-image and academic skills will

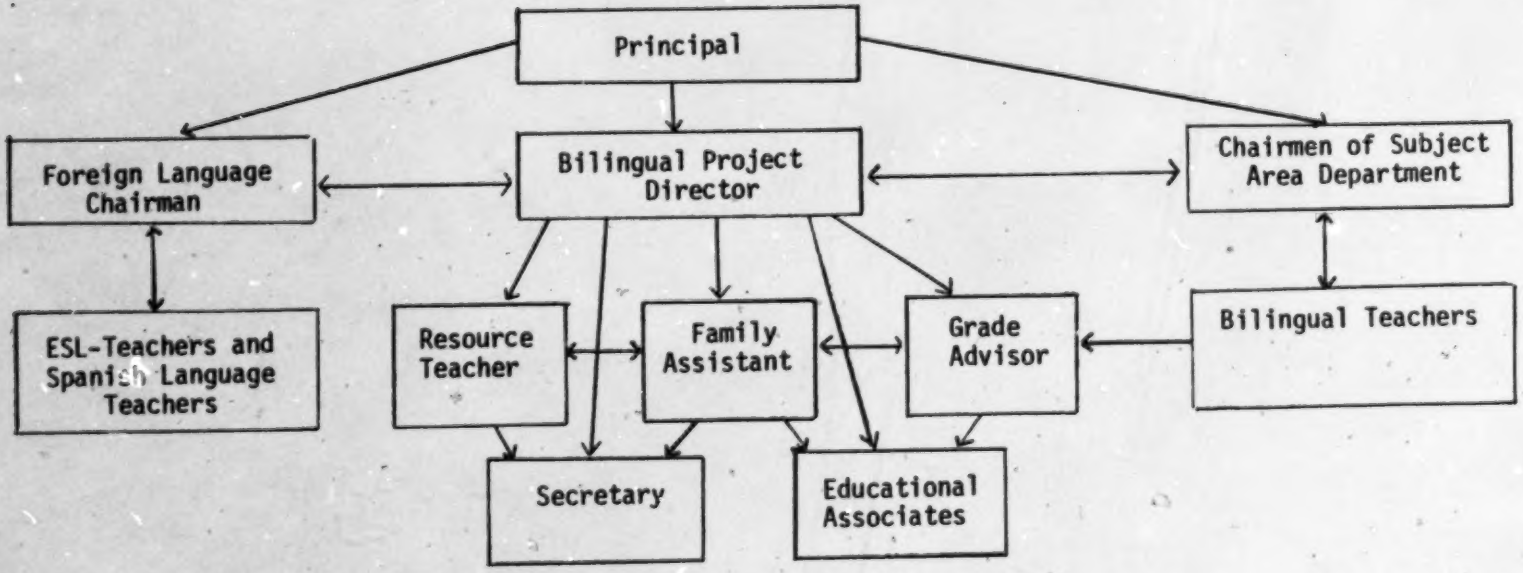
prepare LEP students to compete in an English speaking society. Self-image is enhanced by the provision of a program which recognizes, accepts and reinforces ethnic identity. Academic skills will develop and increase if they are specifically reinforced by recognition, praise and reward. Students are reinforced for improvement in Spanish and English and for achievement in subject areas. Cooperative activities, such as peer tutoring and cultural trips, are used as encouragement, while praise and prizes are used as reinforcements. This philosophy of positive reinforcement has been supported by the Principal.

The following chart describes the organization of the program. It shows that the bilingual program at DeWitt Clinton is both unified and dispersed. It is unified, for all Title VII staff members (other than teaching staff) are supervised by the Project Director and are located in one area of the school. The program is dispersed since the instructional components for the subject areas located within the different departments are supervised by the various department chairpersons. Within this organization, the Project Director supervises the Title VII personnel with the occasional involvement of the Principal. The department chairpersons supervise the bilingual teachers with some assistance from the Foreign Language Chairperson and the Project Director. Reportedly, the bilingual program is favorably regarded by many teachers and administrators in the school. Some teachers have expressed their favorable impressions orally and in written form. The Administrative Assistant has made positive comments about the program, and has allocated more space to the program than it had the previous year.

CHART 1

ORGANIZATIONAL CHART FOR BILINGUAL PROGRAM AT

DEWITT CLINTON



The bilingual program, located within the DeWitt Clinton High School building has facilities which are now adequate. The facilities consist of two moderate-sized rooms for the full-time use of the Title VII personnel. One of these rooms is used for counseling and secretarial work and the other as a resource room. In addition, a classroom has been provided for two-thirds of the day to be used for peer-tutoring, group counseling and parent workshops.

IV. INSTRUCTIONAL COMPONENT

The bilingual grade advisor or the bilingual counselor, who is also the Project Director, develop students' programs in conference with individual students. Many factors are considered in programming. Among these are: the student's proficiency in English and Spanish; his/her academic achievement in subject areas; the student's interests in electives (art, music, science, social studies, electives, etc.); and graduation requirements.

Programming is more uniform in ninth and tenth grades, with some individualization based on linguistic considerations. Eleventh and twelfth grade students have programs which are more individualized, since students' English proficiency is expected to have improved and, after completion of requirements for graduation, students have more flexibility in selecting electives. The difference in programs between grades depends primarily upon the language proficiency of the student. Typical programs for grades 9 and 10 are presented in Table I.

TABLE I

TYPICAL PROGRAM FOR BILINGUAL STUDENTS IN GRADES 9 AND 10

GRADE 9	GRADE 10
1. ESL (Title I)	1. English RIT (Title I Reading)
2. ESL (Title I)	2. English UT or LT (English Back-up/ Tax Levy)
3. EF2 (English Back-up/Tax Levy)	3. Social Studies (Bilingual)
4. Social Studies (Bilingual)	4. Modified Math or Algebra (Bilingual)
5. Modified Math or Algebra (Bilingual)	5. Biology A or General Biology 1 (English speaking teacher with bilingual educational associate)
6. Spanish (Native Speakers)	6. Spanish (Native Speakers)
7. Health Education	7. Health Education

The program for grade 9 is typical of a student of severely limited English proficiency. The student takes two periods of ESL and one of English back-up. All other subject areas are in Spanish. The student in the tenth grade, with more proficiency in English, takes two periods of English (Reading and Back-up), and all subject areas in Spanish, except science which is taught by an English monolingual teacher with the help of a bilingual educational associate.

Students are partially or fully mainstreamed according to the following criteria: a) reading level in English is at or above the ninth grade; b) the LAB score in English is at or above the 21st percentile; c) the student desires to leave the bilingual program and the parents consent to it. Students might meet criteria a and b, but they may remain partially in the program if they want/need the services. Some of these students are used as role models for students in the program.

Parental consent is a principal factor in mainstreaming. When consulted, parents are usually amenable to mainstreaming, as are students. If a student is prematurely mainstreamed, he may be reinstituted in the program. For some students such requests for reinstatement stem from their desire to return to the "bicultural" aspects of the program, or for "social adjustment" reasons. For others, it represents an inability to profit from instruction conducted solely in English. Reportedly, parents prefer that students continue to receive services from Title VII personnel, particularly tutoring and guidance/counseling. Parents consistently express a strong desire for follow-up services to mainstreamed students by the bilingual staff.

Such follow-up services to fully mainstreamed students are varied. Students: a) return voluntarily to visit the bilingual office and talk about their mainstream experience; b) are referred to the bilingual office when problems arise in their new academic programs; c) are sent for by the Project Director, Grade Advisor, or Family Assistant to informally talk about their academic and personal adjustment; d) are referred by the parents to consult with the bilingual staff. The bilingual staff periodically discusses recently mainstreamed students with their new teachers and counselors, and with the parents and students themselves.

Students leave the program for reasons other than mainstreaming. Table II presents the reasons for and number of students leaving the program during academic year 1979-1980.

TABLE II

STUDENTS LEAVING THE PROGRAM DURING 1979-1980 AND THEIR REASON FOR LEAVING

REASON	NUMBER OF STUDENTS
Fully Mainstreamed	9
Graduated	9
Discharged to Special Ed.	3
Discharged to Job Corps	2
Transferred to Another School	5
Returned to Native Country	4
Removed by Parental Option	1
Discharged Themselves (over 17 years of age)	3
Discharged to Auxiliary Services	6
Total	42

Forty-two students left the program during the 1979-1980 school year. Eighteen left due to mainstreaming and graduation. Eleven were discharged to alternative programs: three to Special Education, two to Job Corps, and six to Auxiliary Services. One student was removed by parental request and three students over 17 years of age requested to be discharged. Four students returned to their native country and five transferred to another school. Since DeWitt Clinton High School is a non-zoned specialized (all boys) school, students have an option twice a year to transfer to a coed school in their own neighborhood. However, in the second year of the bilingual program, there was a dramatic reduction in the number of bilingual students transferring to another school when compared with that of previous years.

The following table presents the distribution of students in the program taking content areas in Spanish.

TABLE III

DISTRIBUTION OF STUDENTS ACCORDING TO PERCENTAGE OF INSTRUCTION IN SPANISH

STUDENT CLASSIFICATION	PERCENTAGE OF STUDENTS TAKING CONTENT AREAS IN SPANISH
9th and 10th grades	95%
10th and 11th grades	40%
Completed ESL	33%

As the students' English proficiency improves, the need to take content area courses in Spanish decreases. According to Table III, most students in ninth and tenth grades (95%) take their content areas in Spanish. Students in tenth and eleventh grades begin to be partially mainstreamed. Forty percent of the students in these two grades take their content areas in Spanish. About one third of the students who have completed ESL (33%) still take content areas in Spanish.

Twenty-four students (13%) take all or most of their content area courses in English, but are still provided with supportive services by the program. There are two types of students in this category:

1. students who have mastered sufficient English for placement in the mainstream, but who for personal reasons need the supportive services of Spanish speaking personnel to facilitate and strengthen their adjustment;
2. students who have equal proficiency in Spanish and English but whose parents want them to take content areas in English, while improving their Spanish language ability and benefiting from services to enhance cultural self-concept.

Funding Sources for the Instructional Component

In order to provide all the necessary instructional services, the bilingual program tapped several funding sources. The three principal sources during 1979-1980 were Tax Levy, ESEA Title I and ESEA Title VII. Title I was used for the English language instruction of students in ESL and Reading classes. Tax Levy funds were used for some ESL instruction and all content area instruction: native language, math, social studies, science, art, music, vocational education and physical education. Title VII provided funds for the administration and supervision of the bilingual instructional component. In the following table, a description of the instructional component by funding source is presented.

TABLE IV

INSTRUCTIONAL COMPONENT PERSONNEL BY FUNDING SOURCE

INSTRUCTIONAL COMPONENT	FUNDING SOURCE	NUMBER OF PERSONNEL TEACHERS	PARAS
ESL	Tax Levy	1	0
	Title I	1	1
Reading (English)	Title I	3	5
Native Language	Tax Levy	4	0
Math	Tax Levy	1	0
	Title VII	0	1
Social Studies	Tax Levy	1	0
	Title VII	0	1
Science	Tax Levy	1	0
	Title VII	0	1
Other (Music, Art,) Vocational Ed., etc.	Tax Levy	1	0

A special feature of the instructional component is its reliance on individualized instruction. Individualized instruction is utilized in the bilingual peer-tutoring program and in the Title I English reading classes. A Title IV-C mini-grant for the next year has been obtained to provide funds for payment of bilingual peer-tutors. This way more students will receive individualized instruction from paid tutors. Bilingual educational associates engage in daily individualized (one-to-one) instruction in the classrooms, the office and the tutoring room. Parents and community volunteers also provided individualized tutoring.

Classes

Students in the program participated in bilingual program classes as well as classes in the mainstream, monolingual English program. The program of bilingual instruction included the following:

a. English as a Second Language instruction with some students assigned additional ESL periods depending on their English language proficiency;
b. Modified English and/or reading classes for all students receiving ESL instruction (Students not receiving ESL instruction are assigned to Title I reading classes and back-up Tax Levy English classes.);
c. Instruction in Spanish in mathematics, science and social studies;
d. Content area courses in English for students whose English language competence was advanced;
e. Reading in Spanish with remedial Spanish reading available for students who are illiterate in both languages;
f. Courses in Hispanic history and culture for all participating students.

The following two tables present the program classes in which students were registered. All classes met for five periods a week, except for ESL2 which met for ten periods per week. All classes were conducted by one teacher with a bilingual paraprofessional, except for ESL classes which were conducted by two teachers and one paraprofessional. All classes were conducted in Spanish and English, with the exception of ESL and Spanish which were conducted entirely in English and Spanish, respectively. All mainstream classes were conducted in English. The criteria for grouping in all classes were the student's grades and language ability. The ESL level for each student was determined by administering a teacher made test and the Criterion Referenced English Syntax Test (CREST). The ratio of oral English to oral Spanish in content area classes ranged from 20% to 80% depending upon the makeup of the class. The students' native culture was included in the ninth grade social studies class, focusing on Latin America with specific emphasis on the Caribbean.

TABLE V

BREAKDOWN OF STUDENTS IN BILINGUAL CLASSES

Subject	Grade Level	# of Registered Students	Criteria for Selection	Other Comments
ESL 2	ungraded	15	English ability of students whose second language is English	Tested by ESL teachers and department Chairman
ESL 3	ungraded	13		
ESL 4	ungraded	25		
ESL 5	ungraded	38		
EF 2	ungraded	26		Tax Levy English Backup for Title 1 ESL
EF 4	ungraded	21		
Speech Lab FX	ungraded	9	Foreign Accent	
SSA7BL	ungraded	27	For Spanish dominant	Social Studies classes in Spanish
SSB6BL	ungraded	22		
SSC3BL	ungraded	30		
SSD1BL	ungraded	30	For English dominant	
Bio A BL	ungraded	23	Service Classes for Bilingual Students	Spanish instruction is offered by paraprofessionals
G S 15 BL	ungraded	21		
G B 27 bl	ungraded	23		
G B 24 BL	ungraded	26		
Fund Math BL	ungraded	25	50% Span.	
Fund Math BL	ungraded	26	40% Span.	
Fund Math BL	ungraded	39	20% Span.	
Algebra BL	ungraded	25	80% Span.	
Spanish	ungraded	169	Depending upon Proficiency	

TABLE VI

BREAKDOWN OF STUDENTS IN MAINSTREAM CLASSES

Subject	Grade Level	# of Students Registered	Criteria for Selection	Other Comments
Social Studies 2T	9	2	very slow readers	
Social Studies 2M*	9	1	slow readers	
Social Studies 2	9	2	average readers	
Social Studies 4M*	10	2	slow students	
Social Studies 4	10	3	average readers	
Social Studies 5M*	11,12	1	slow readers	American History
Social Studies 6	11,12	2	average readers	Economics
Social Studies 7M*	11,12	4	slow readers	American History
Current Events	11,12	4	average readers	Elective
Math. Foundations FM4*	10	11		Modified
Record Keeping 1	10	2	follows FM 4	Commercial Arithmetic
Algebra A	ungraded	4	average students	
Algebra B	ungraded	4	average students	
Algebra C	ungraded	6	average students	
Geometry 1,2	ungraded	5	average students	
Math BCT	seniors	1	preparation for BCT	
Math SAT 8	seniors	1	preparation for SAT	
Gral. Science 1	9	3	average readers	Intro. to Biol.Sci.
Gral. Science 2M*	9	1	slow readers	Intro. to Phys.Sci.
Biology A	10	1	average readers	Regents Biology

TABLE VI Cont.

BREAKDOWN OF STUDENTS IN MAINSTREAM CLASSES

Subject	Grade Level	# of Students Registered	Criteria for Selection	Other Comments
Gral. Biology 2	10	1	slow readers	Sex Education
Biology 3M*	11,12	1	slow readers	Modified
Health Services	ungraded	4		Elective
Horticulture	ungraded	3		Elective
Earth Science 1	ungraded	1	average readers	Elective
Earth Science 1M*	ungraded	2	slow readers	Elective
Animal Care 2	ungraded	1		Elective
Chemistry 2	11,12	2	above avg. student	
Physics 2	11,12	2	above avg. student	
E 2 RIT	ungraded	4	Title I	
E 4 RIT	ungraded	17	English Reading	
E 6 RIT	ungraded	9	Classes for 9th, 10th,	
E 8 RIT	ungraded	5	11th, 12th grades	
E 2 LT	ungraded	3	Tax Levy	LT=Lower Level
E 2 UT	ungraded	3	Back-up	UT=Upper Level
E 4 LT	ungraded	19	for Title I	
E 4 UT	ungraded	3	English	
E 6 LT	ungraded	19	Reading	
E 6 UT	ungraded	8	Classes	
E 8 UT	ungraded	3		

18

TABLE VI Cont.

BREAKDOWN OF STUDENTS IN MAINSTREAM CLASSES

Subject	Grade Level	# of Students Registered	Criteria for Selection	Other Comments
E 2 LS	ungraded	8	Students with	
E 4 LS	ungraded	12	Below Grade	
E 4 US	ungraded	2	Level Reading	Tax Levy
E 6 US	ungraded	3	Scores who are	
E 7 LS	ungraded	1	not in Title I	
E 8 LS	ungraded	1	Reading Classes	
E 4	ungraded	2	English for	
E 6	ungraded	4	Students who	Regular English
E 8+	ungraded	4	Read at Grade	
Others	ungraded		Level	
Music Courses	ungraded	30	Several Courses in Music	
Art Courses	ungraded	46	Several Courses in Arts	
Vocational Courses	ungraded	9		

* Modified taking in account students' English proficiency levels

The two preceding tables are intended to illustrate the range of classes received by program students in both the bilingual and mainstream programs. In the bilingual mode, the concentration is on ESL instruction with back-up English reading provided by Title I or Tax Levy (see Mainstream Classes).

Most of the students in the program are enrolled in ESL classes. Bilingual instructors teach classes in mathematics and social studies. A monolingual instructor with the help of a bilingual paraprofessional, teaches the courses in science. All students in the program take courses in Spanish. The courses they take depend on their Spanish proficiency.

Some of the bilingual students who have sufficiently mastered English are provided with instruction in the mainstream program. Some of the courses in social studies, math and science have been modified to take into account the varying linguistic abilities of the bilingual students.

Tutoring

In addition to the regular classes provided in the bilingual and monolingual mainstream modes, students in the bilingual program participate in a peer-tutoring program. This program provides individualized instruction to students who request it. The peer-tutoring program has been functioning for the last two years. During the 1979-1980 school year ten students served as tutors for the different skill areas in the curriculum. For the next year (1980-1981) a mini-grant was obtained to pay the bilingual peer tutors as an added reward to continue reinforcing the basic skills of those students in need.

V. THE NON-INSTRUCTIONAL COMPONENT

The students in the bilingual program at DeWitt Clinton High School also receive non-instructional services. These services range from the

development of bilingual curricula to counseling and home visits. The next table provides an overview of the funding source and services provided by the non-instructional component at this site.

TABLE VII

NON-INSTRUCTIONAL COMPONENT BY FUNDING SOURCE AND PERSONNEL PROVIDING SERVICES

Area	Funding Source	Personnel Providing Services
Curriculum Development	Title VII	1 Social Studies Bil. Teacher
Supportive Services	Title VII	1 Project Director, 1 Grade Advisor, 1 Family Assistant — Counseling and Educational Planning
Staff Development	Title VII	1 Project Director 1 Resource Teacher
Parental Involvement	Title VII	1 Family Assistant

Each of these areas will be described separately in the following subsections.

Curriculum and Materials Development

Though there were no funds for a Curriculum Developer for this program, curricula in different areas have been developed in the last two years, mainly in the area of social studies, where a curriculum for Estudios Latinoamericanos was developed. This curriculum is a ninth grade, in-depth treatment of geography and history of Latin America with visual aids. During 1979-1980, the area of emphasis has been "Estudio Historico de las Minorías que Construyeron los Estados Unidos".* It is expected that this curriculum will be field tested during the 1980-1981 school year.

The bilingual mathematics classes used the bilingual curriculum and materials developed by the Brandeis High School bilingual program.

Supportive Services

To complement the instruction provided to students in the bilingual program at DeWitt Clinton High School, a series of activities were planned and carried out during the 1979-1980 school year. Some of these activities were cultural, others were career oriented and others were just informational. A list of these activities has been compiled and is presented under two categories: services to students from DeWitt Clinton, and services available from sources outside DeWitt Clinton.

---

*("Historical Study of The Minorities Who Built The United States".)

The services provided to the bilingual students from outside DeWitt Clinton were the following:

1) Aspira Health Careers Program

   a) Meeting with Mr. Nelson Vega, Health Careers Counselor of Aspira - October 11, 1979

   b) Assembly on "Opportunities in Health Careers" - November 20, 1979

      About 90 students attended in various small groups. A lecture was given by Mr. Nelson Vega who: presented information on health careers; distributed cards for students' addresses and career interests; arranged personal interviews to do individual career counseling.

   c) Individual career counseling with bilingual students

2) Latin American Institute - December 1979

   Representative explained careers and opportunities available after graduation to about 110 bilingual students (during social studies classes)

3) After School Bilingual Shop Program at Samuel Gompers Vocational and Technical High School

   Free Bilingual Shop Courses
   Electrical Trades
   Radio and T.V. Repair
   Computer Programming
   Word Processing
   Data Processing
   Business Machine Repair

4) Bronx Career Center--Bronx Career and Occupational Services for students to use on different days.

5) Center for Career and Occupational Education

   One student participated in the after school Occupational Skills Program

6) Aspira Annual Junior College Interview Meeting sponsored by Aspira - Columbia University, May 22, 1980, attended by 10 students.

Students also received supportive services from inside DeWitt Clinton during the 1979-1980 school year. Activities included the following:

1) Tutoring: (Briefly described in the Instructional Component section of this report.) Forty-five percent of the students in the program received tutoring offered by:

   a) peers (supervised)
   b) staff (paraprofessionals and teachers)
   c) volunteers--1 parent and 1 Lehman College student
   d) "Big Brothers" tutors--for social studies

2) Individual Counseling:

   a) educational counseling to 100% of the students
   b) personal and social counseling to 35% of the students (family, emotional problems, etc.)

3) Group Guidance and Counseling:

   a) group counseling to approximately 40% of the students
   b) group guidance to almost 90% of the students

4) (Supervised) Peer Counseling to 20% of the students

5) Referral services to agencies and clinics for about 30% of the students (Puerto Rican Family Institute, Catholic Charities, Hospital Mental Health Clinics, etc.).

6) Three students to the Committee on the Handicapped for placement in Special Education Programs.

7) Referrals to/from Title I Counselor for Supportive Services (5% of the students)

8) Assemblies:

Puerto Rican Discovery Day	November 1979 120 students attended
Dominican Independence	February 27, 1980 120 students attended
Awards Assembly	June 12, 1980 85 students attended

The bilingual students and the program staff went on several cultural trips during the 1979-1980 school year. All of these trips were offered as rewards to students who fulfilled behavioral contracts or had achieved in attendance or academic performance. The trips were the basis for discussions before and after the events, in the bilingual social studies classes and/or English as a Second Language classes. The cultural trips are presented by semester. All students went on at least one trip during the year.

1. Fall 1979 Semester:

   Museo del Barrio
   Hispanic Society of America
   Museum of the American Indian
   Numismatic Society
   The First Hispanic World's Fair

2. Spring 1980 Semester:

   Observation Deck of the World Trade Center
   Central Police Headquarters
   United Nations
   Circus
   Radio City Music Hall
   New York Aquarium
   West Side Story

Staff Development

Two types of staff development activities were provided during the 1979-1980 academic year. These may be categorized as workshops and staff meetings, and university courses. Each of these activities will be described in a separate subsection.

1) Workshops/Meetings for Staff Development:

   a. Weekly meetings took place to discuss programmatic activities and students in general. Attendance: Staff and Title VII personnel.

b. Staff training was provided for teachers (50 hours) and paraprofessionals (50 hours) from September 1979 to May 1980. Among the topics covered were the following:

1. Counseling and guiding the bilingual student
2. Case studies of specific problem students
3. Reinforcement of Positive Behavior
4. Enhancement of Student Self-Concept
5. Improving the Image of the Bilingual Program in the School and the Community
6. Developing Curriculum
7. History of Bilingual Education

c. Training sessions for peer tutors and peer counselors

2) University Courses:

Title VII funded university courses for teachers and bilingual staff. The following table presents the courses taken by the bilingual teachers and staff during the 1979-1980 school year.

TABLE VIII

UNIVERSITY COURSES TAKEN BY BILINGUAL TEACHERS/STAFF DURING 1979-1980

Personnel Category	Institution	Fall 1979	Spring 1980	Totals
1. Social Studies Teacher	1. Teachers College	3	3	6
2. Project Director	2. Teachers College	3	-	3
3. Resource Teachers	3. a. City College b. N.Y.U.	6	8	14
4. Family Assistant	4. CUNY	-	10	10
5. Grade Advisor	5. Teachers College	6	9	15
6. Educational Associate I	6. Lehman College	11	7	18
7. Educational Associate II	7. Teachers College	9	4	13
	Total	38	41	79

Table VIII illustrates that one bilingual teacher and most of the bilingual Title VII staff were taking courses at universities during the 1979-1980 school year. The universities they attended were: Teacher's College (Columbia University), CUNY, New York University and Lehman College. A total of 79 credits were earned during the school year, 38 credits in the fall and 41 in the spring. Courses dealt

with bilingual education, bilingualism, linguistics, culture and history, supervision and administration, and child development.

3) Other Staff Development Activities:

The Project Director, Resource Teacher, Family Assistant and Grade Advisor are the four most important non-instructional positions funded by Title VII. The following lists cite conferences and other activities attended by these individuals. Unless otherwise indicated the Project Director was the person attending the activity.

A. Conferences Attended by Project Director

The Project Director attended the following conferences during 1979-1980.

1) The Third Annual National Title VII Bilingual Management Institute
Washington, D.C./ November 4-8, 1979

2) The Third Annual Conference of the New York State Association for Bilingual Education (SABE)
Kiamesha Lake, New York/ February 8-10, 1980

3) The Ninth Annual International Bilingual Bicultural Conference
Anaheim, California/ April 18-23,1980

4) A Pilot Institute for Bilingual Education and Parental Involvement
Office of Bilingual Education and Minority Language Affairs
Albuquerque, New Mexico / July 11-13,1980
(Also attended by a parent serving on the Title VII Parent Advisory Committee of DeWitt Clinton High School)

B. Workshops Attended by Project Director

The Title VII Project staff attended the following workshops during 1979-1980 (if no person is mentioned, the Project Director attended):

1) Eight workshop sessions at Wingate Teacher Training Institute, Wingate Bilingual Studies conducted by George Adamovich, Project Director at Wingate High School / October 11, 18, 25, November 1, 15, 29 and December 6, 13, 1979

2) Seminars sponsored by the Aspira Mayor's Scholarship Program during the months of November, December, and January (Financial Aid Workshop, T.A.P. Workshop, and "Special Programs" Seminars) attended by Resource Teacher

3) Workshops in preparation for holiday seasons (activities and ideas that focus on multicultural Christmas celebrations), conducted by the Regional Bilingual Training Resource Center Title VII for Staff Development (131 Livingston Street) attended by Resource Teacher / December 7, 1979

4) Title VII, ESEA Technical Assistance Workshops, OBE (General presentations and small group sessions) Fordham University, Lincoln Center / January 15 and 16, 1980

5) The First Testing and Evaluation Conference in Bilingual Education (workshops on Evaluation Models), Office of Bilingual Education, Center for Assessment and Evaluation, Fordham University, Lincoln Center / February 2, 1980.

6) Teaching ESL and Bilingual Education in a Multicultural Setting, Fordham University, Lincoln Center / May 10, 1980

c) Conference in which Project Director Collaborated Actively, and Served as Chairperson of Publicity Committee

First Annual Hispanic Parents' Conference on Education
Primera Conferenica Anual Para Padres Hispanos Sobre Educacion,
Hunter College, June 7, 1980

D. Meetings Attended by Project Director (Outside of DeWitt Clinton)

1) Bronxwide Articulation Planning Committee
for Title VII Directors and Assistant Principals in the Bronx,
Lehman High School / October 10, 1979

2) Meeting of Title VII Project Administrators,
Bureau of Bilingual Education,
Two World Trade Center / October 26, 1979

3) Administrative Meeting for Title VII Project Directors
(65 Court Street)/December 12, 1979
attended by Project Director and Resource Teacher

4) Meeting - "Other Than Personal Service (OTPS)
Policy and Procedures - FY 1980"
(65 Court Street)/February 20, 1980
attended by Project Director and Resource Teacher

5) Meetings to discuss ESEA, Title VII Proposals, FY 1980-81
(110 Livingston Street)/March 13 and May 13, 1980

6) Meetings in preparation for First Annual Hispanic Parents
Conference.

a) Committee Meeting(Organizational)
Hunter College / February 27, 1980

b) Committee Chairpersons meeting
Two World Trade Center / March 14, 1980
attended by Project Director, Resource Teacher and
Family Assistant

c) Committee Chairpersons Meeting
Two World Trade Center / May 28, 1980

7) Meeting to Review the Instructions for Completing the 1979-80
Evaluation Reporting Forms ("Bubble Sheets")
(110 Livingston Street)/June 6, 1980
attended by Project Director and Resource Teacher

8) Guidance Meeting and Luncheon (Bronx High School
Guidance Association)
Lehman College /June 11, 1980

Parental and Community Involvement

The Bilingual Program at DeWitt Clinton High School has understood the necessity of involving the students' parents in their children's education. This task has been a very difficult one; nevertheless, the bilingual staff has implemented several activities to strengthen this component.

The program has an active Parent Advisory Committee which gives input to the program director on programmatic activities and policies, and helps in communicating information to other parents. The Advisory Committee is composed of six parents and four students who volunteered for these positions and were approved by the majority of the parents. This Committee met for the first time on October 27, 1979. Subsequent meetings took place on the last Tuesday of each month during November, January, February, March, April and May.

The Resource Teacher conducted parent workshops on English as a Second Language (ESL). These workshops were offered twice a week as one and a half hour sessions on Tuesdaysand Thursdays. The ESL classes took place during the months of March, April and May, 1980. These classes were attended by an average of 12 to 18 parents.

Parents also received workshops on guidance. Two guidance workshops were conducted by the Project Director in March for a total of four hours. The objectives of these workshops were the following:

a. To understand school procedures
b. To assist their children in improving their academic achievement
c. To understand the importance of reading both Spanish and English
d. To guide parents in achieving better cultural understanding for themselves and their children
e. To encourage parents to involve other parents

Parents were also involved in several cultural activities with their children. Among these activities were:

a) Open School Afternoon

b) Open School Evening

c) Puerto Rican Discovery Day

d) Dominican Independence Day

e) Award Assembly

The Project Director chaired one of the organizational committees at the First Hispanic Parents Conference which took place on March 14, 1980. The Project Director and one parent attended the pilot Institute on Bilingual Education and Parental Involvement on July 11-13, 1980, in Albuquerque. They were the only representatives from New York City at this conference.

The Project Director and the Family Assistant identified several factors which they feel affect parent participation in DeWitt Clinton. Among these factors were:

a) availability of time for parents to attend activities

b) the necessity of reinforcing information: staff members have to keep in touch with parents, especially before scheduled meetings, to ensure attendance.

The family assistant recommended that staff members be assigned to make contacts with parents. In addition, it was suggested that several parents cooperate in this task.

Affective Domain

The DeWitt Clinton bilingual program believes strongly in providing activities which will enhance the students' self-concept and will improve

their achievement in the subject areas. Throughout the year several activities which involved the affective domain were carried out by the bilingual program. A list of the most significant ones has been compiled and are presented below:

1) Students collected and contributed money to help the people affected by Hurricane David in the Dominican Republic in September, 1979.
2) Graduated students sent letters of appreciation to project staff and teachers.
3) During the fall, 1979, students signed contracts for attendance and conduct. Students were rewarded with tickets to the circus, the theatre, etc.
4) Students in the program received awards and honors, as described below:

   Three students were accepted by Arista, the National Honor Society.

   Two students received cash awards for "Excellence in Bilingual Studies" (at graduation).

   Four students received awards for "Outstanding Contribution and Service to the Bilingual Program" (at graduation).

   One student received the "Eileen Blatt Memorial Award" (at graduation).

   One student received the "G.O. Medal for Excellence in English as a Second Language" (at graduation).

   Two students received the "G.O. Gold Medal for Excellence in Spanish Four Years (Native Group)", (at graduation).

   One student received award for "Excellence in Horticulture" (at graduation).

Twelve students received awards--Certificates of Merit--for Outstanding Progress in English as a Second Language.

One student receive a special letter from the principal for "demonstrating wonderful personal qualities and concern for the school."

One student was named to the Chancellor's Roll of Honor.

Fourteen students were awarded scholarship cards and placed on the academic honor roll for having attained averages of 85% and above.

5) Nine students were graduated during the 1979-1980 school year. Two graduates received scholarships (one to Colgate University and one to Baruch College).

6) High percentages of bilingual students had missed four days of school or less during the school year.

7) Only 19 bilingual students dropped out of school during 1979-1980 as compared to over 50 students who dropped out during the 1978-1979 school year.

8) Only two students were suspended this year. This figure is very low when compared to the previous year.

9) Students have stated that they receive more attention in the Title VII bilingual program than in the regular (mainstream) program.

Dissemination

Several channels have been used to disseminate information about the activities of this bilingual program. Two such channels have included: visits to junior high schools in the Bronx, and the bilingual newsletters.

1) Visits to junior high schools in the Bronx

Over 15 junior high schools were visited by the Title VII staff during the months of February, March and April 1980. Slides were shown, bilingual newsletters and flyers were distributed, the Title VII program and other school programs and activities were described, and questions were answered.

2) Two bilingual newsletters (Noticias Bilingües) were written, printed and disseminated. These were:

a) hand distributed to all faculty members, administration and Title VII students at DeWitt Clinton High School;

b) mailed to other Title VII programs in New York City;

c) mailed to administrative offices in New York City, i.e. Bronx Superintendent, Office of Bilingual Education, High School Office at Board of Education, community agencies;

d) mailed to all junior high schools in the Bronx;

e) mailed to other Title VII programs in the United States;

f) mailed to all parents of Title VII students.

3) Visits into the community

On October 16, 1979 the Resource Teacher attended the unveiling and presentation of "The Rising of the Puerto Rican Sun", a sculpture by the Puerto Rican artist Rafael Ferrer, located in the heart of the South Bronx.

VI. FINDINGS

Assessment Procedures and Findings

The following section presents the assessment instruments and procedures, and the results of the testing.

Assessment Procedures and Instruments

Students were assessed in English language development, growth in their mastery of their native language, mathematics, social studies and science. The following are the areas assessed and the instruments used:

English as a Second Language	--	Criterion Referenced English Syntax Test (CREST)
Reading in English	--	New York City Reading Test
Reading in Spanish	--	CIA Prueba de Lectura
Mathematics Achievement	--	New York City Mathematics Test
Mathematics Performance	--	Teacher-Made Tests
Science Performance	--	Teacher-Made Tests
Social Studies Performance	--	Teacher-Made Tests
Attendance	--	School and Program Records

The following analyses were performed:

a) On pre/post standardized tests of English Reading, Native Language Reading and Mathematics, statistical and educational significance are reported:

1) Statistical Significance was determined through the application of the correlated t-test model. This statistical analysis demonstrates whether the difference between pre-test and post-test mean scores is larger than would be expected by chance

variation alone; i.e. is statistically significant.

This analysis does not represent an estimate of how students would have performed in the absence of the program. No such estimate could be made because of the inapplicability of test norms for this population, and the unavailability of an appropriate comparison group.

2) Educational Significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen.[1]

An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

---

[1] Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977 Chapter 2.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size indices are recommended by Cohen as guides to interpreting educational significance (ES):

a difference of 1/5 = .20 = small ES

a difference of 1/2 = .50 = medium ES

a difference of 4/5 = .80 = large ES

b) On the Criterion Referenced English Syntax Test (CREST) information is provided on the number of objectives attempted and mastered, the percentage of objectives mastered versus those attempted, and the number of objectives mastered per month of treatment. Information is also provided on student performance on the various test levels.

c) The results of the criterion referenced tests in mathematics, social studies, science and native language arts are reported in terms of the number and percent of students achieving the criterion levels set for the participants (60% passing).

d) Information is provided on the attendance rate of students participating in the bilingual program, compared with that of the total school population.

The following pages present student achievement in tabular form.

TABLE IX

English as a Second Language

FALL

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment *	Objectives Mastered Per Month
9	33	10.7	5.1	48%	3.0	1.7
10	22	8.4	3.3	39%	3.0	1.1
11	6	8.3	1.8	22%	2.9	.6
12	5	9.8	2.2	22%	3.0	.7
Totals	66	9.6	4.0	41%	3.0	1.3

* Instructional time between pre- and post-testing

On the average, students tested in the Fall with the CREST attempted from 8 objectives in grades 10 and 11 to 11 objectives in grade 9. They mastered from 2 objectives in grades 11 and 12 to 5 objectives in grade 9 regardless of test level. When mastery rates are in units of instructional time, it was observed that on the average, students in grades 11 and 12 mastered .6 and .7 objectives respectively per month and 9th and 10th grade students mastered more than 1 objective per month. It should be noted that the number of students in the upper grades are small, and the results may represent the effects of a selection factor.

TABLE X

English as a Second Language

FALL

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	33	189	63	33%	124	84	68%	39	22	56%
10	22	80	22	28%	49	30	61%	55	20	36%
11	6	29	1	3%	6	6	100%	15	4	27%
12	5	31	6	19%	-	-	-	18	5	28%
Totals	66	329	92	28%	179	120	67%	127	51	40%

The analysis by grade and test level indicates that students worked on test levels of the CREST in Fall in direct relation to their grade level. Overall, students succeeded most on the intermediate level (Level II). Success on levels I and III was quite variable in the four grade levels. Most students experienced more difficulty in mastering English language objectives on Level I.

TABLE XI

English as a Second Language

SPRING

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment *	Objectives Mastered Per Month
9	19	8.2	4.2	51%	2.8	1.5
10	11	8.6	3.5	41%	2.8	1.3
11	4	6.5	3.0	46%	2.9	1.0
12	4	11.3	3.5	31%	1.8	1.9
Totals	38	8.5	3.8	45%	2.5	1.5

* Instructional time between pre- and post-testing

On the average, students tested in the Spring with the CREST showed an improvement in test performance with respect to the rate of growth. Students in all grades mastered at least one English language objective per month of instruction, with achievement ranging from a low of 1.0 objectives per month at the eleventh grade to 1.9 objectives per month at the twelfth grade.

TABLE XII

English as a Second Language

SPRING

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	19	130	64	49%	8	3	38%	18	13	72%
10	11	64	23	36%	21	8	38%	10	8	80%
11	4	12	2	17%	--	--	--	14	10	71%
12	4	45	14	31%	--	--	--	--	--	--
Totals	38	251	103	41%	29	11	38%	42	31	74%

The analysis by grade and test level of the results in the Spring testing with the CREST indicates that test level performance was again related to grade level. Overall, students succeeded more at the upper level of the test (Level III). On this level, students mastered more than 70% of the attempted objectives.

TABLE XIII

English Reading Achievement

Significance of Mean Total Raw Score Difference Between Initial and Final Test Scores in English Language Achievement of Students with Full Instructional Treatment on the New York City Reading Test

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	P	ES
9	6	22.8	15.5	29.3	9.4	6.5	.92	2.03	.05	.83
10	25	24.2	10.5	30.4	12.0	6.2	.84	4.81	.001	.96
11	8	37.6	7.6	33.9	9.9	-3.7	.78	-1.7	NS	--
12	4	38.0	16.1	41.3	5.1	3.3	.93	.83	NS	.42

Table XIII presents achievement data for students on the New York City Reading Test. Students in grades 9 and 10 showed raw score gains of 6 raw score points while 12th grade students showed gains of 3 raw score points. The gains for students in grades 9 and 10 were statistically significant at the .05 and .001 significance level respectively. Students in grade 11 showed a nonsignificant mean decrease from pre-test to post-test performance. The gains for students in grades 9 and 10, when expressed in standard deviation units were judged to be of large educational significance, and the achievement gains for 12th grade students were of small to moderate educational significance. Results for students in grades 9 and 10 should be interpreted with extreme

TABLE XIII

(continued)

caution. Observed raw score means are borderline probable chance scores(within two standard errors of an expected chance mean). This suggests low precision of measurement within a large score range of the sample. The instrument was in all likelihood too difficult for students at these grade levels, thereby inviting widespread guessing. Results for grade 11 are difficult to interpret given a small sample size (n=8). Grade 12 students (sample size of 4) showed small to medium educationally significant gains.

TABLE XIV

Native Language Reading Achievement

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in Native Language Reading Achievement of Students with Full Instructional Treatment by Test Level on the CIA Prueba de Lectura.

		Pre-Test		Post-Test						
Test Level	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	P	ES
2	37	42.6	18.8	51.9	19.3	9.3	.76	4.33	.001	.71
4	24	34.9	18.3	46.7	24.9	11.8	.84	4.22	.001	.86
5	23	32.8	15.6	35.9	19.3	3.1	.68	1.05	NS	.22

Table XIV presents achievement data for students on the CIA Prueba de Lectura. Students tested on Level 2 showed raw score gains of 9 raw score points while students tested on Level 4 showed gains of 12 raw score points. Students tested on Level 5 showed a gain of 3 raw score points. The gains for students on Levels 2 and 4 were statistically significant at the .001 significance level. Students tested with Level 5 did not make gains which reached statistical significance at the .05 probability level. The gains for students tested on Levels 2 and 4, when expressed in standard deviation units were judged to be of moderate and large educational significance respectively. The achievement gains for students tested on Level 5 were of small educational significance. Stu-

TABLE XIV

(continued)

dents tested on Level 2 and 4 showed statistically and educationally significant gains. Students tested on Level 5 did not make statistically significant gains, but the observed gain of 3 points was judged to be educationally significant.

TABLE XV

Mathematics Achievement

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in Mathematics Achievement of Students with Full Instructional Treatment on the New York City Mathematics Test

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	P	ES
9	35	16.4	4.4	19.3	7.0	2.9	.16	4.28	.0025	.72
10	39	21.1	11.1	21.7	8.3	.6	.39	.34	NS	.05
11	10	16.9	6.1	16.4	8.9	-.50	.80	-.29	NS	--
12	9	19.4	5.6	21.0	7.1	1.7	.60	.80	NS	.27

Table XV presents achievement data for students on the N.Y.C. Mathematics Test. Students in grade 9 showed a raw score gain of 3 raw score points. The gains for students in grade 9 was statistically significant at the .0025 significance level. Students in grades 10 through 12 did not make gains that reached statistical significance at the .05 probability level. Students in the 11th grade showed a nonsignificant decrease. The gains for students in grade 9 when expressed in standard deviation units were judged to be of moderate to large educational significance, and the achievement gains for 12th grade students were of small educational significance. However, the above data should be interpreted with extreme caution. At each grade

TABLE XV

(continued)

level, raw score means were at close to probable chance score levels (within 2 standard errors of the expected chance score). This suggests the instrument was rather difficult for this group and with low reliability of measurement.

TABLE XVI

Mathematics Performance

Number and Percent of Students Passing Teacher-Made Examinations in Mathematics.

	Fall 1979			Spring 1980		
GRADE	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	27	13	48%	28	21	75%
10	47	23	49%	43	21	49%
11	19	13	68%	13	7	54%
12	14	13	93%	7	6	86%

In the Fall term, the percentage of students passing teacher-made examinations in Mathematics ranged from 48% in grade 9 to 93% in grade 12. In Spring, the percent mastering the curriculum ranged from 49% in grade 10 to 86% in grade 12.

TABLE XVII

Science Performance

Number and Percent of Students Passing Teacher-Made Examinations in Science

	Fall 1979			Spring 1980		
GRADE	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	13	10	77%	19	15	79%
10	42	32	76%	48	37	77%
11	15	15	100%	14	11	79%
12	9	9	100%	9	8	89%

In the Fall term, the percentage of students passing teacher-made examinations in Science ranged from 76% in grade 10 to 100% in grades 11 and 12. In Spring, the percent mastering the curriculum ranged from 77% in grade 10 to 89% in grade 12.

TABLE XVIII

Social Studies Performance

Number and Percent of Students Passing Teacher-Made Examinations in Social Studies

	Fall 1979			Spring 1980		
GRADE	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	33	30	91%	28	21	75%
10	46	40	87%	32	25	78%
11	22	21	96%	19	16	84%
12	14	13	93%	12	10	83%

In the Fall term, the percentage of students passing teacher-made examinations in Social Studies ranged from 91% in grade 9 to 96% in grade 11. In Spring, the percent mastering the curriculum ranged from 75% in grade 9 to 84% in grade 11.

TABLE XIX

Attendance Rates

Number and Percent of Students Surpassing the General School Attendance Rate, Reporting the Program Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	Number Surpassing Rate	% Exceeding School Rate
9	55	78.4%	22.0	39	71%
10	83	72.6%	25.3	60	72%
11	23	86.7%	10.0	21	91%
12	20	89.1%	8.4	18	90%

The average attendance rate ranged from 73 percent for 10th grade students to 89% for 12th graders. The percent of students exceeding the schoolwide attendance rates ranged from 71% in grade 9 to 91% in grade 11. Thus, the program students attended school at average rates far in excess of non-program students which suggests high levels of motivation among program students at all grade levels.

VII. SUMMARY OF FINDINGS

Students in the DeWitt Clinton High School Bilingual Program were assessed in the areas of English as a Second Language, reading in English and Spanish, mathematics achievement and mathematics, science and social studies performance. Also, information on the attendance rate of students was presented. The findings for the 1979-1980 school year show:

1) The number of objectives mastered per month in English as a Second Language in the CREST improved from fall testing to spring testing. By the spring, students in all grades mastered at least one objective per month of ESL instruction.
2) Results in English reading achievement were varied and difficult to interpret. There were positive significant gains in two grades, but the New York City Reading Test was deemed too difficult for some students, and thus invited widespread guessing.
3) Results in Spanish reading achievement showed students making positive gains from pre to post testing on all three test levels. Two of the gains were statistically significant. All gains were judged to have some educational significance.
4) Results in mathematics achievement on the New York City Mathematics Test showed students making postive gains from pre to post-testing in two grades. One of these gains was statistically significant, two of the mean differences were not positive. The data from this test should be

interpreted with caution. The instrument used appears to have been too difficult for this group and could have resulted in low reliability of measurement.

5) The student performance in teacher-made tests in mathematics was best in the 12th grade: 93% mastery in the fall and 86% in the spring. The same held for science: complete class mastery in the fall and 89% mastery in the spring. For social studies, 11th graders performed the best: 96% mastery in the fall and 84% in the spring.

6) At least two thirds of the students in the program showed better attendance rates than the school rate. Over 90% of students in 11th and 12th grades showed better attendance rates than the school rate.

VIII. CONCLUSIONS AND RECOMMENDATIONS

In general, this project was implemented as proposed. There were some difficulties during the beginning of the school year in procuring and maintaining the needed bilingual staff. Still, the activities carried out by the bilingual staff and their impact show improvement over the previous year.

This year the bilingual program was more favorably regarded by other teachers and administrators in the school and from some other schools. Some of the salient characteristics of the program which should be highlighted are: the peer tutoring program, the cultural activities, the counseling and referral services; the improvement of parental involvement and the affective educational approach with students. These are among the factors which resulted in students in the bilingual program faring better than schoolwide figures on attendance, drop-out and absenteeism rates, and awards and honors. Students and parental support for the program is evidenced by the high number of students eligible for full mainstreaming who requested to remain affiliated with the program to some extent and to participate in their supportive services and activities.

The bilingual program in DeWitt Clinton has expanded and thus it is hoped that school officials will give it the attention, institutional support and resources it deserves in order to continue growing. Specifically, it is recommended that permanent staff positions be secured to include, minimally, a project director, resource specialist, family assistant, grade advisor, secretary, and paraprofessionals.

With a full staff, the project director should be able to delegate responsibilities to others, to be better able to concentrate her energies on the supervision and administration of the program.

Alternate funding services should be explored to complement the existing ones, as was done with the tutoring program.

The application of the New York City Reading Test and the New York City Mathematics Test yielded results which suggest that the instruments were too difficult for the population served. This may be due to the limited English proficiency of the students. It is recommended that the performance of these instruments be reviewed to determine their curricular relevance and linguistic appropriateness. Such a review may result in a decision to modify the present assessment program.

Finally, it is recommended that the areas of career and vocational education be explored for emphasis in future years.